

Claims

What is claimed is:

- 1 1. A terminal for a wireless link in a metropolitan area network, the terminal
2 comprising:
- 3 a. a extender device for receiving Ethernet data packets from a computer network
4 coupled to the extender device and for forwarding the Ethernet data packets;
5 and
6 b. a broadcast device coupled to the extender device for receiving the Ethernet
7 data packets from the extender device according to baseband transmission and
8 having a wireless transceiver for communicating the Ethernet data packets over
9 the wireless link.
- 1 2. The terminal according to claim 1 further comprising a cable coupled between
2 the extender device and the broadcast device wherein the cable comprises a twisted pair of
3 conductors for providing the Ethernet data packets from the extender device to the broadcast
4 device.
- 1 3. The terminal according to claim 2 wherein the twisted pair of conductors is a
2 Category 5 twisted pair of conductors.
- 1 4. The terminal according to claim 2 wherein the Ethernet data packets are Fast
2 Ethernet data packets.
- 1 5. The terminal according to claim 1 wherein the broadcast device further
2 comprises:

- 3 a. a microwave antenna coupled to the wireless transceiver; and
4 b. a housing coupled to the microwave antenna for enclosing the wireless
5 transceiver.

1 6. A terminal for a wireless link in a metropolitan area network, the terminal
2 comprising:

- 3 a. a extender device having a full-duplex Ethernet data packet regenerator for
4 coupling a computer network to the extender device;
5 b. a broadcast device coupled to the extender device, the broadcast device having
6 a full-duplex data packet transceiver for communicating Ethernet data packets
7 with the full-duplex data packet regenerator and having an antenna for wireless
8 communication over the wireless link wherein Ethernet data packets are
9 communicated between the extender device and the broadcast device according
10 to baseband transmission.

1 7. The terminal according to claim 6 wherein the broadcast device further
2 comprises a housing coupled to the antenna for enclosing the full-duplex data packet
3 transceiver.

1 8. The terminal according to claim 6 further comprising a cable coupled between
2 the extender device to the broadcast device wherein the cable comprises a first twisted pair of
3 conductors for providing the Ethernet data packets from the regenerator to the full-duplex
4 packet transceiver.

1 9. The terminal according to claim 8 wherein the twisted pair of conductors is a
2 Category 5 twisted pair of conductors.

1 10. The terminal according to claim 8 wherein the Ethernet data packets are Fast
2 Ethernet data packets.

1 ⑪ A terminal for a wireless link in a metropolitan area network, the terminal
2 comprising:

- 3 a. an extender device comprising:
- 4 i. a full-duplex Fast Ethernet data packet regenerator for receiving Fast
5 Ethernet data packets from a computer network; and
6 ii. a half-duplex 10BASE-T Ethernet data packet repeater for receiving
7 10BASE-T Ethernet data packets from the computer network; and
8 b. a broadcast device coupled to the extender device by a cable, the broadcast
9 device comprising:
- 10 i. a full-duplex data packet transceiver for communicating the Fast
11 Ethernet data packets with the full-duplex Fast Ethernet data packet
12 regenerator;
- 13 ii. a half-duplex data packet transceiver for communicating the 10BASE-T
14 Ethernet data packets with the half-duplex 10BASE-T data packet
15 repeater; and
- 16 iii. an antenna coupled to the full-duplex data packet transceiver and to the
17 half-duplex 10BASE-T data packet transceiver for wireless
18 communication over the wireless link.

1 12. The terminal according to claim 11 wherein the data packets are
2 communicated between the extender device and the broadcast device according to baseband
3 transmission.

1 13. The terminal according to claim 11 wherein the cable comprises a first twisted

2 pair of conductors for providing the 10BASE-T Ethernet data packets from the extender
3 device to the broadcast device.

1 14. The terminal according to claim 13 wherein the cable comprises a second
2 twisted pair of conductors for providing the 100BASE-T Ethernet data packets from the
3 extender device to the broadcast device.

1 15. The terminal according to claim 14 wherein the second twisted pair of
2 conductors is a Category 5 twisted pair of conductors.

1 16. A method of communicating Ethernet data packets in a wireless network,
2 wherein the method comprises steps of:
3 a. receiving an Ethernet data packet via baseband transmission into a broadcast
4 device;
5 b. formatting the Ethernet data packet to a radio frame in the broadcast device;
6 and
7 c. communicating the radio frame via a microwave antenna coupled to the
8 broadcast device.

1 17. The method according to claim 16 wherein the Ethernet data packet is a Fast
2 Ethernet data packet.

1 18. The method according to claim 17 further comprising a step of providing the
2 Ethernet data packet to the broadcast device from a extender device coupled a local area
3 network.

1 19. The method according to claim 18 wherein the extender device includes a data

2 packet regenerator for receiving Ethernet data packets from a computer network.

1 20. The method according to claim 19 wherein the data packet is a Fast Ethernet
2 data packet.

1 21. A terminal for a wireless link in a metropolitan area network, the terminal
2 comprising:

- 3 a. an extender device for receiving data packets from a computer network coupled
4 to the extender device and for forwarding the data packets; and
5 b. a broadcast device coupled to the extender device, wherein the broadcast device
6 comprises:
7 i. a layer-two network switch for receiving the data packets from the
8 extender device according to baseband transmission; and
9 ii. a wireless transceiver coupled to the layer-two network switch for
10 communicating the data packets over the wireless link.

1 22. The terminal according to claim 21 wherein the data packets are Ethernet data
2 packets.

1 23. The terminal according to claim 22 wherein the data packets are Fast Ethernet
2 data packets.

1 24. The terminal according to claim 21 further comprising a cable coupled between
2 the extender device and the broadcast device wherein the cable comprises a twisted pair of
3 conductors for providing the data packets from the extender device to the broadcast device.

1 25. The terminal according to claim 24 wherein the twisted pair of conductors is a

2 Category 5 twisted pair of conductors.

1 26. The terminal according to claim 21 wherein the broadcast device further
2 comprises:

- 3 a. a microwave antenna coupled to the wireless transceiver; and
4 b. a housing coupled to the microwave antenna for enclosing the wireless
5 transceiver.

1 27. The terminal according to claim 21 wherein the layer-two network switch
2 comprises:

- 3 a. a full-duplex 100BASE-T port for receiving a first portion of the data packets
4 from the extender device according to baseband transmission;
5 b. a half-duplex 10BASE-T port for receiving a second portion of the data packets
6 from the extender device according to baseband transmission; and
7 c. a media independent interface (MII) coupled to the wireless transceiver.